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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,724	01/15/2002	Vince Hilser	HO-P02070US1	5156
26271	7590	08/17/2004	EXAMINER	
FULBRIGHT & JAWORSKI, LLP 1301 MCKINNEY SUITE 5100 HOUSTON, TX 77010-3095			LY, CHEYNE D	
			ART UNIT	PAPER NUMBER
			1631	

DATE MAILED: 08/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

3M

Office Action Summary

Application No.

10/047,724

Applicant(s)

HILSER ET AL.

Examiner

Cheyne D Ly

Art Unit

1631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 1-18, 23-33 and 36-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-22, 34 and 35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-38 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/17/02 & 11/07/0</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Applicant's election without traversal of Group II, claims 19-22, 34, and 35, filed May 27, 2004, is acknowledged.
2. Claims 1-18, 23-33, and 36-38 have been withdrawn due to being directed to the non-elected Group.
3. Claims 19-22, 34, and 35 are examined on the merits.

OBJECTIONS

4. The disclosure is objected to because of the following informalities: The Brief Description of the Drawings recites figures that are not in the formal drawings, filed January 15, 2002. For example, paragraph [0026] recites "Figure 1A and Figure 1B" while "Figure 1A and Figure 1B" have not been found in said formal drawings. It is noted that this objection is directed to the entire Brief Description of the Drawings due to the recitation in the instant specification being inconsistent with the formal drawings, filed January 15, 2002.
5. The title of the invention is not descriptive because the instant title is directed to thermodynamic propensities while the claimed invention is directed to a method and computer readable medium. A new title is required that is clearly indicative of the invention to which the claims are directed.
6. Appropriate correction is required.

CLAIM REJECTIONS - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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8. Claims 19-22, 34, and 35 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory algorithm type subject matter.

9. Claims 19-22, 34, and 35 are rejected because said claims are directed to a method and computer readable medium comprising algorithmic steps for analyzing protein data without any physical alteration step, which is considered to be non-statutory subject matter. "For example, a computer process that simply calculates a mathematical algorithm that models noise is nonstatutory. However, a claimed process for digitally filtering noise employing the mathematical algorithm is statutory." (MPEP § 2106 (IV)(B)(2) (b), part ii). Similar to the nonstatutory example above, the instant invention comprises algorithmic steps for analyzing protein data without any physical alteration resulted from said analysis or modeling steps.

10. It is acknowledged that the instant invention comprises a computer readable medium for performing the steps of analyzing protein data, however, said steps do not cause any physical alteration outside of said computer readable medium as a result of said analysis. Therefore, "such activity is not determinative of whether the process is statutory because such transformation alone does not distinguish a statutory computer process from a nonstatutory computer process" (MPEP § 2106 (IV)(B)(2) (b), part ii).

CLAIM REJECTIONS - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 19-22, 34, and 35 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hilser et al. (1996).

13. Hilser et al. discloses a method of calculating the equilibrium-folding pathway of proteins as directed to different thermodynamic environments corresponding to known proteins (Abstract etc.), as in instant claim 19.

14. The method of Hilser et al. involves the calculation of the relative heat capacity, enthalpy, and entropy of each state at the desired temperature (page 762, column 1, lines 13-28), as in instant claims 20 and 22.

15. The method of Hilser et al. comprises constructing scoring matrices derived of thermodynamic information for determining the distribution of amino acids (Figure 1 and Table 1), as in instant claim 21.

16. The method of Hilser et al. is computer implemented (page 760, column 2, Computer modeling strategy §) using the MOLSCRIPT program (page 769, Figure 9), as in instant claims 34 and 35.

CONCLUSION

17. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

18. Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of

document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

19. For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Dune Ly, whose telephone number is (571) 272-0716. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

21. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, Ph.D., can be reached on (571) 272-0722.

C. Dune Ly
7/21/04

Arden J. Maciel 8/17/04
Arden J. Maciel
Patent Examiner